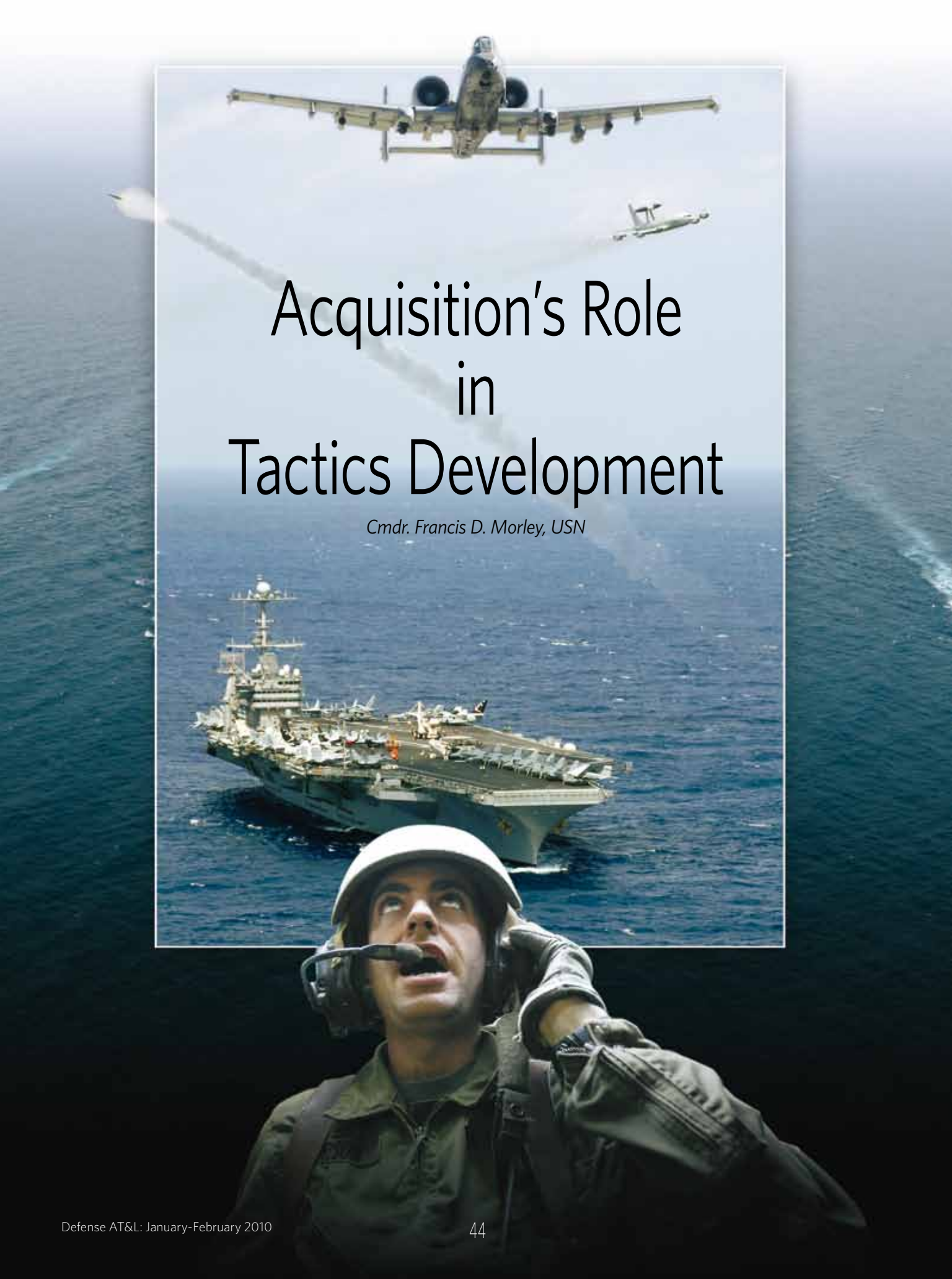

Acquisition's Role in Tactics Development

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What role should the acquisition, development, test, and evaluation communities play in tactics development? There are numerous tactics development centers of excellence in all the military services. For example, naval aviation currently has the Naval Strike Air Warfare Center, Top Gun, the Marine Aviation Weapons and Tactics Squadron, and operational test and evaluation squadrons that play a role in providing tactical guidance and recommendations to the fleet. Is there a place—or need—for the acquisition community to involve itself in operational tactics development? Yes!

The complexities of systems the Department of Defense is currently fielding are such that early development of employment guidance is essential for satisfactory achievement of initial operational capability. For example, the F/A-18 and EA-18G Program Office has recently fielded the active electronically scanned array radar and will be fielding future systems such as infrared search and track, the distributed targeting processor, and the EA-18G Growler. Those systems, and many others being developed throughout the military services, are substantially changing the way DoD employs weapons systems, and they are demonstrating greater processing power and rapid technology advancement. It often takes significant time to fully understand the systems and their provided capabilities and determine how best to use them.

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The result is that systems are being fielded with limited initial tactical guidance, leading to inefficient initial exploitation of new capabilities and frustration within the operational forces. Steps must be taken to address and overcome such problems. Specifically, program offices should attempt to determine seam issues and remedies in providing employment considerations and recommendations to the operational forces with newly fielded systems, and offices should determine a process to capture derived capabilities of newly fielded systems discovered in the operational forces so that future acquisition strategies can be adjusted. This article provides examples of how to do that.

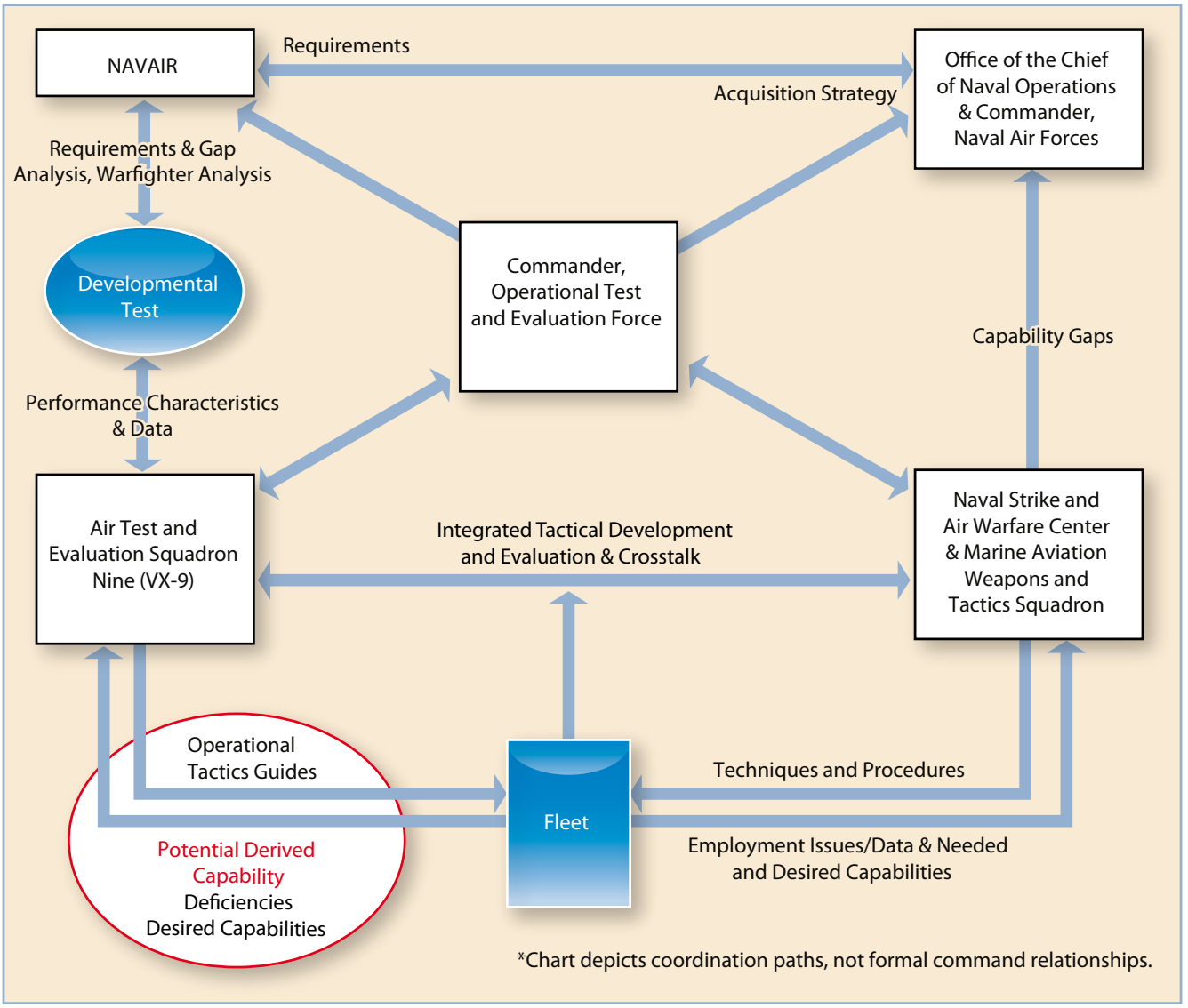
Causes of Problems

The reasons for the problems in implementing new systems are varied: system complexity; limited assets (personnel, budget, platforms); acquisition timeline not aligned with tactics development timeline; and not fully exploiting current paths available as a result of lack of resources, time, effort, and awareness.

The result is lack of early employment guidance. In the absence of employment guidance or recommendations, the operational forces do what they have always done: press forward and execute. They develop their own tactics. They determine functionality in the new system that was never expected or realized in the test stage. They deploy and adapt the new systems to the current tactical employment framework and the mission at hand. However, that is a frustrating and inefficient process and does not always result in the most effective tactics and employment of new systems.

Within naval aviation, for example, the Naval Strike Air Warfare Center, Top Gun, and the Marine Aviation Weapons and Tactics Squadron develop and provide employment recommendations to the fleet. They do the job magnificently.

Feedback Loops



However, because of the demand pull from the fleet as new systems roll off the production line, members of the squadron often don't have a chance to get their hands on the new systems until well after the systems have been fielded in the fleet. Squadron members often have to wait until fleet systems come through Marine Corps Air Station Yuma or Fallon Naval Air Station (where the tactics development centers of excellence reside) on operational training events such as Navy Fighter Weapons School classes or Carrier Air Wing work-ups for deployment. Once the personnel have the ability to employ and gather enough data on the systems, they produce superb employment recommendations, as they always have. However, that takes place well after initial operational capability and often after first operational deployments of new systems.

DoD can help address some of those challenges within the construct of the organizations already in place. Operational evaluation organizations exist that can provide the initial employment guidance of newly fielded systems to the first users. They do this today to some extent. However, increased complexity of new systems, competing resource demands, and priority fielding pressures make providing guidance an ever-increasing challenge. Formal processes between the acquisition community and the operational evaluators that allow for early and robust transfer of system data and development efforts will help address that challenge and result in allowing the first operational user to receive stronger initial employment guidance.

What role should the acquisition, development, test, and evaluation communities play in tactics development?

Developing New Guidance

The operational test commands are the first to use new systems as they mature and complete development; therefore, it is logical to look to those commands for help in developing new employment guidance and recommendations. Current instructions and force structure allow for early operational guidance and derived capability feedback to come from the operational test squadrons and the operational test and evaluation force. Sticking with the Navy for our example, OPNAVINST 5450.332 states: "Commander, Operational Test and Evaluation Force (COMOPTEVFOR) Functions and Tasks—Develop initial tactics and procedures for employment of new systems that undergo [operational test and evaluation], or as directed by [the chief of naval operations], through liaison with Commander, Naval Strike Air Warfare Center." Then-Rear Adm. David Architzel, former commander, Operational Test and Evaluation Force (COMOPTEVFOR), was quoted in the COMOPTEVFOR Strategic Plan 2004-2007 as stating, "We have a unique opportunity to introduce an operational perspective early in the system acquisition process to decrease the program modifications needed later in development. Limiting these modifications enhances the return on investment for the acquisition community and increases warfighter readiness by reducing the level of performance risk."

As a result of many of the causal factors previously discussed, the competing demands on resources for operational test and initial tactics development, the current fleet demand for systems, and the overall complexity of the new systems, COMOPTEVFOR cannot do its tasks alone nor put out required initial guidance in the timeline currently desired.

Bringing Tactical Operations into Acquisitions

The acquisition community can help address the problem, particularly in the area of timelines. Of course, certain causal factors and constraints will always exist, but DoD must look for ways to develop meaningful employment guidance in time to put it in the hands of the first operational units of a new system as they receive the newly fielded systems. The acquisition community is involved in the development of game-changing systems years in advance of fielding. The future threat is assessed in threat analysis efforts. Gap analysis is conducted to determine need. Warfighting analysis is conducted to determine requirements. Flight plans and road maps are produced. Functional and technical solutions are developed. Funding is budgeted. All those tasks are done well in advance of a system's coming off the production line, being tested and evaluated for operational effectiveness and suitability, and being fielded to the operational forces—and it is where the acquisition community can make a difference.

Acquisition efforts involve knowledgeable professionals who understand the systems better than anyone and have thought through how to initially employ the systems well before operators become involved. DoD must exploit the efforts of acquisition personnel and make their analyses and efforts available to the operational testers and tactics, techniques, and procedures centers of excellences across the department. DoD must push such information forward and better develop formal communication paths between these various agencies so they can use that data in advance of receiving systems and author initial employment guidance and recommendations earlier.

Some of that is being done today with recently established integrated test and evaluation processes that bring the op-

erational test community into the loop early in the developmental test and gradually increase the operational test community's involvement as the system continues to mature through development. That has had a significant effect on increasing the maturity of the system through development by obtaining the operational viewpoint early while also providing the operational tester with a better understanding of the new system earlier. The EA-18G Growler is a successful example of that, as the program adopted a construct of integrated test and evaluation throughout its development and came through its initial operational test and evaluation with an "effective and suitable" assessment from COMOPTEVFOR.

In the absence of employment guidance or recommendations, the operational forces do what they have always done: press forward and execute. They develop their own tactics.

The Next Level

That is just a start. Providing technical data, warfighter analysis, and requirements-driving employment concepts developed by the acquisition community to the operational test community prior to testing, or even the delivery of test systems, would allow the operational testers to begin to develop employment guidance even earlier than is done today.

In addition, communication paths can be better used to provide feedback from various agencies to the acquisition community regarding derived capability determined by operational forces and others. Often, the operational forces determine a capability in a system not previously known. The capability may very well be in a future acquisition roadmap. Timely feedback on such issues will allow adjustment of current and future acquisition strategies and, ultimately, result in budgetary savings.

The figure, Feedback Loops, is not intended to depict formal command relationships or chain of command. Rather, it identifies the key organizations involved in the fielding of a new system (within the naval aviation community, which is the example provided) and suggests possible coordination paths to develop better and in a more timely manner useful tactics and employment guides and recommendations of today's complex systems . The relationships depicted in the figure all exist today in some form or another.

Many are somewhat weak, however, because of resource constraints, priorities, or informal nature. For example, the transfer of employment-related data derived from years of development efforts from Naval Air Systems Command and the program offices to the developmental testers and into the hands of naval aviation's operational tester, Air Test and Evaluation Squadron Nine, is not as robust or as formal as it should be. Information and data transfer is more relationship-based than reliant on formal process. Data are often provided once a system is in operational test instead of months or years earlier, when advance preparation can result in more robust employment guidance. Additionally, the integrated tactical development and evaluation between the operational testers and the Employment Guidance Center of Excellence—Naval Strike and Air Warfare Center is somewhat challenged as a result of competing priorities, physical separation, and insufficient resources. Finally, there is no formal feedback chain of derived capability back through the operational testers and to the developers and acquirers; if better defined, such a feedback chain would possess significant opportunities to save acquisition resources.

All of those examples demonstrate areas where improvements could be made to existing organizational relationships and processes to make a real, positive effect on providing more timely employment guidance to initial operators of newly fielded complex systems. In all of the examples, the acquisition community has involvement and can play a direct role in improving tactics development.

By having the acquisition community become more involved in tactics development, DoD can address and improve a current deficiency in the fielding of complex new systems: the development of strong employment guidance. By further developing communication paths with the appropriate agencies, the department could receive feedback to help it adjust acquisition strategies and save dollars. I encourage everyone within the acquisition community to continue to nurture and formalize their communications with the operational testers; tactics, techniques, and procedures centers of excellence; and operational forces to look for opportunities to push information, analysis, and data to them well in advance of system fielding, helping them do their job better and earlier. Ultimately, such efforts will result in a more useful product to DoD's operational forces and increased mission effectiveness earlier in the life cycle of complex systems.

The author welcomes comments and questions and can be contacted at francis.morley@navy.mil.